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10/577,920	01/26/2007	Katsura Koyagi	290694US26X PCT	6875
22850	7590	02/20/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WAITS, ALAN B	
			ART UNIT	PAPER NUMBER
			3656	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/577,920	Applicant(s) KOYAGI ET AL.	
	Examiner ALAN B. WAITS	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/13/2007, and 8/1/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, “the plurality of convex parts arranged in the circumferential direction in a predetermined interval” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "13 and 18" and "51 and 54" have both been used to

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designate "flange" and "adhering part" respectively. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 9 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 recites the limitations "the axial direction", "the outer end part in the axial direction of the fitting cylindrical part", and "the other". There is insufficient antecedent basis for these limitations in the claim.

Claim 1 recites the limitation "a fitting cylindrical part". It is unclear if this is the same cylindrical part as recited previously in claim 1 or a new element.

Claim 1 recites the limitation "a fixed member". It is unclear if this is the same "a fixed member" as previously recited in claim 1 or a new fixed member.

Claim 1 recites the limitation "the cylindrical part". It is unclear which cylindrical part this refers to.

Claim 1 recites the limitation "the outer end part in the axial direction of the fitting cylindrical part is insert molded so as to be positioned in the resin". It is unclear how the outer end part can be fixed to the rotating member and also fixed to the fixed member via the resin.

Claim 2 recites the limitation "the cylindrical part". It is unclear which cylindrical part this refers to.

Claims 2 and 3 recite the limitation "configured by". It is unclear how the limitations following the limitation configure the structure proceeding the limitation.

Claim 2 recites the limitation "a coupling part". It is unclear if this is the same coupling part as previously recited in claim 1 or a new element.

Claims 2 and 3 recite the limitation "made to". It is unclear how the proceeding limitation is made to adhere to the following limitation.

Claim 3 recites the limitation “more depressed”. It is unclear what an outer portion is more depressed than.

Claim 3 recites the limitation “the end part”. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation “the inner diameter”. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitations “the resin member”, “the outer surface”, and “the inner surface”. There is insufficient antecedent basis for these limitations in the claim.

Claim 6 recites the limitations “the resin portion”, “the outer surface”, and “the inner surface”. There is insufficient antecedent basis for these limitations in the claim.

Claim 10 provides for the use of a hub unit, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

Claim 10 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue US 2004/0136628.

Inoue discloses a similar device comprising:

Re clm1:

- A fixed side seal member (22, fig 2) including a core metal (26, fig 2) fitted and fixed to a fixed member (14, fig 2) and a sensor resin (8, fig 2) molded to the core metal
- A rotating side seal member (24, fig 2) including a cylindrical part (34a, fig 2) fitted and fixed to a rotating member (16, fig 2) and a flange part (38, fig 2) extending towards the fixed side seal member in continuation with an outer end part (40, fig 2) in the axial direction of the cylindrical part
- The core metal of the fixed side seal member includes a fitting cylindrical part (26a, fig 2) fitted and fixed to a fixed member (14, fig 2)
- A coupling part (26b, fig 2) extending towards the cylindrical part of the rotating side seal member in continuation with an inner end part (32, fig 2) in the axial direction of the cylindrical part

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- A moisture entering prevention cylindrical part (30, fig 2) extending outward in the axial direction in continuation with the coupling part
- The outer end part in the axial direction of the fitting cylindrical part is insert molded so as to be positioned in the resin (fig 2, product-by-process claim)

The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113.

- An elastic seal (38 and 40, fig 2) is arranged on at least one of the core metal and the rotating side seal member to slidably contact the other

Re clm 2:

- The rotating side seal member includes a pulser (12, fig 2) arranged at an inner portion in the axial direction of the cylindrical part
- The pulser being configured by a supporting member including a large diameter cylindrical part (26a, fig 2), a small diameter cylindrical part (34a, fig 2), and a coupling part (26b, fig 2)
- A magnetized body (top of 12, fig 2) arranged in the supporting member so as to face the sensor
- The elastic seal being arranged at the outer end part in the axial direction of the moisture entering prevention cylindrical part of the fixed side seal member and made to approach the outer portion in the axial direction of

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the cylindrical part and the flange part of the rotating side seal member (fig 2)

Re clm 3:

- A step (where 34 meets 12, fig 2) including an inner portion in the axial direction and an outer portion in the axial direction that is more depressed is formed at the end part of the rotating member
- The cylindrical part of the rotating side seal member is fitted to the outer portion in the axial direction of the step (fig 2)
- A supporting member of the pulser configured by a magnetized body is fitted to the inner portion in the axial direction of the step of the rotating member (fig 2)
- The magnetized body of the pulser is arranged at the supporting member so as to face the sensor (fig 2)
- The elastic seal is arranged at the outer end part in the axial direction of the moisture entering prevention cylindrical part of the fixed side seal member and made to approach the rotating side seal member (fig 2)

Re clm 4:

- A wiring retrieving cut out (place in 8 were 45b and 45a are located, fig 2) for passing a wiring (45a and 45b, fig 2) connecting the sensor and a signal processing means is arranged at the outer end part in the axial direction of the fitting cylindrical part of the core metal of the fixed side seal member

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Re clm 5:

- The fixed side seal member includes a bulging resin part (part of 8 that sticks out, fig 2) bulging more outward in the axial direction than the rotating side seal member and extending as the inner diameter extend outward in the axial direction

Re clm 6:

- The resin member for holding the sensor includes a positioning planar end face (bottom face of 8, fig 2) spaced apart by a predetermined distance outward in the axial direction from the outer end part in the axial direction of the core metal
- The outer surface and the inner surface in the radial direction of the planar end face being positioned more inward in the axial direction than the planar end face (fig 2)

Re clm 7:

- A plurality of convex parts (46, 45a and 45b, fig 2) are arranged in the circumferential direction in a predetermined interval on at least one of the outer surface or the inner surface in the axial direction of the resin portion exposed from the core metal (fig 3)

Re clm 8:

- The plurality of convex parts (46, 45a and 45b, fig 2) are arranged on both the outer surface and the inner surface in the axial direction of the resin member

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- The convex part on the outer surface in the axial direction acting as a reference surface of pressing in press fitting to the fixed member of the fixed side seal member (intended use, fig 2)
- The convex part on the inner surface in the axial direction contacting the outer ring in press fitting to the fixed member of the fixed side seal member and preventing further press fitting of the core metal (intended use, fig 2)

Re clm 10:

- The fixed ring is a vehicle body side raceway member including an attachment to the vehicle body ([0005])
- The rotating ring is a wheel side raceway member including a wheel attachment ([0005])
- The device is used as a hub unit for an automobile

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inoue US 2004/0136628, Inoue US 2006/0228060 and Sentoku US 2006/0153481 each discloses a similar device. Mizutani US 2004/0105602 discloses similar cylinder geometry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN B. WAITS whose telephone number is (571)270-3664. The examiner can normally be reached on Monday through Friday 7:30 am to 5 pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alan B Waits/
Examiner, Art Unit 3656

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3656